



**DOE/SC CD-2/3 Review**  
of the  
**Muon  $g-2$  Project**  
**Fermi National Accelerator Laboratory**  
**June 25-26, 2015**

**Kurt W. Fisher**  
**Committee Chair**  
**Office of Science, U.S. Department of Energy**

<http://www.science.doe.gov/opa/>



- **Closeout report (prepared in PowerPoint)**
  - Presented Friday, June 26
  - Instructions—slide 11
  - Template—slide 13
- **Final report draft (prepared in MS Word)**
  - Due Monday, June 29 to Casey  
([casey.clark@science.doe.gov](mailto:casey.clark@science.doe.gov))
  - Instructions—slide 12



## **DOE EXECUTIVE SESSION AGENDA**

**Thursday, June 25, 2015—The Comitium, Wilson Hall**

8:00 a.m.	DOE Executive Session.....	K. Fisher
8:10 a.m.	Program Perspective.....	T. Lavine
8:15 a.m.	Federal Project Director Perspective.....	P. Philp
8:25 a.m.	Questions	
8:30 a.m.	Adjourn	

**Project and review information is available at:**

**<https://web.fnal.gov/experiment/MuonG2/Reviews/DOE-CD23followup/documentation/SitePages/Home.aspx>**

**<https://web.fnal.gov/experiment/MuonG2/Reviews/DOE-CD23followup/SitePages/Home.aspx>**

**Password: G2Mreviewer / g2mrev**



# Review Committee Participants

**Kurt W. Fisher, DOE/SC, Chairperson**

**SC1**

**Accelerator**

\* Rod Gerig, retired ANL  
Peter Ostroumov, ANL  
Geoff Pile, ANL

**SC2**

**Storage Ring**

\* Uli Wienands, SLAC

**SC3**

**Technical Integration**

\* GianLuca Sabbi, LBNL  
Bruce Strauss, DOE/SC

**SC4**

**Detectors**

\* Bill Wisniewski, SLAC

**SC5**

**Cost and Schedule**

\* Jerry Kao, DOE/SC  
Ron Lutha, DOE/ASO

**SC6**

**Project Management**

\* Jon Kotcher, BNL  
Dan Green, FNAL Emeritus  
Ethan Merrill, DOE/SC

**Observers**

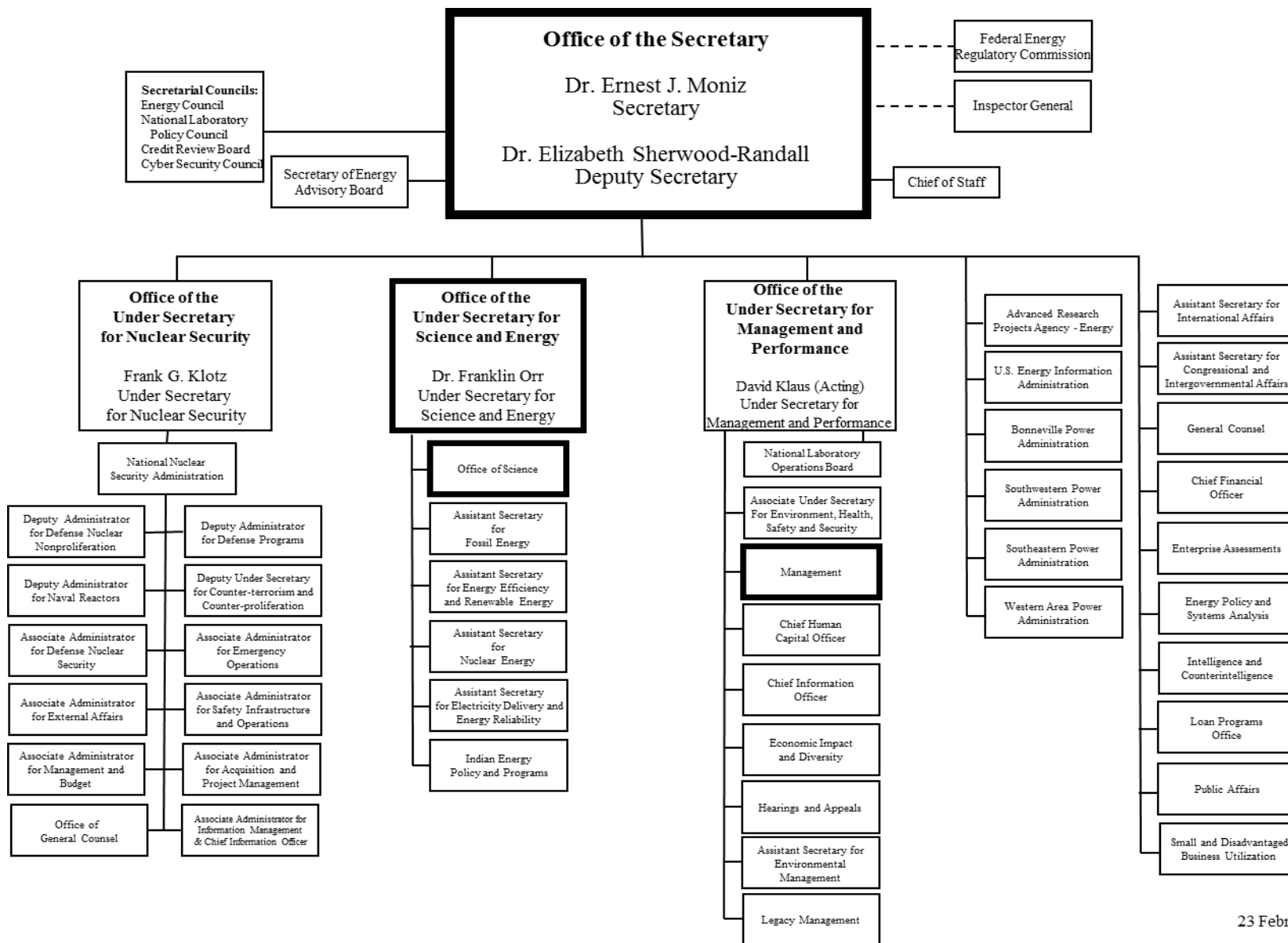
Mike Procario, DOE/SC  
Ted Lavine, DOE/SC  
John Kogut, DOE/SC  
Alan Stone, DOE/SC

Pepin Carolan, DOE/FSO  
Paul Philp, DOE/FSO

**LEGEND**

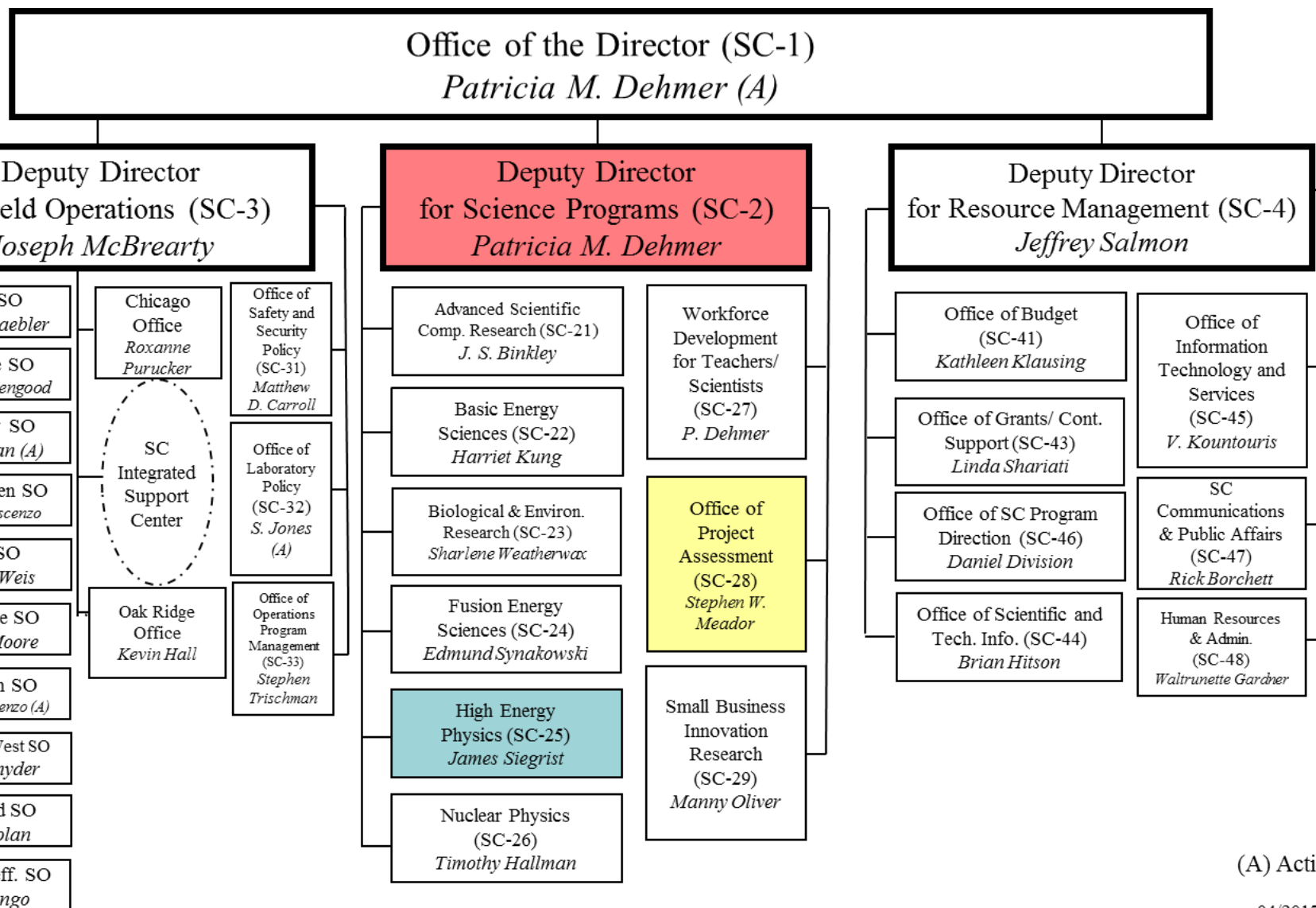
SC Subcommittee  
\* Chairperson

**Count: 13 (excluding observers)**





# SC Organization



(A) Acting



1. Have the Project and the Laboratory responded satisfactorily to the recommendations of the previous DOE review?
2. Is the detailed design sufficiently mature and appropriately reviewed so that the project can continue, as planned, with the procurement and fabrication work?
3. Has the superconducting magnet system for the experiment been tested with positive results?
4. Are there any outstanding issues that need to be addressed?



## Thursday, June 25, 2015—The Comitium, Wilson Hall

8:00 am	Executive Session .....	K. Fisher
8:30 am	Welcome and Fermilab Context .....	N. Lockyer
8:45 am	Laboratory Role and Project Support .....	M. Lindgren
9:00 am	Project Overview .....	C. Polly
	• Response to DOE Review Recommendations	
9:45 am	Break	
10:00 am	WBS Level 2 Summaries.....	H. Nguyen, M. Convery, B. Casey
11:00 am	MC-1 Tour	
12:00 pm	Working Lunch	
1:00 pm	<b><u>Subcommittee Breakout Sessions</u></b>	
	• Session 1 Ring—Location TBD (WH___)	
	• Session 2 Accelerator— Location TBD (WH___)	
	• Session 3 Detectors— Location TBD (WH___)	
	• Session 4 Management— Location TBD (WH___)	
3:00 pm	Executive Session	
5:00 pm	Adjourn	

## Friday, June 26, 2015

8:00 am	Answers to Questions .....	C. Polly
9:00 am	Writing Session.....	Review Committee
10:00 am	Dry Run Closeout .....	K. Fisher
11:00 am	Committee Reconvene with Project Management (if needed)	
12:00 pm	Working Lunch	
1:00 pm	Closeout	
2:00 pm	Adjourn	





# Report Outline/Writing Assignments

Executive Summary .....	Fisher*
1. Introduction .....	Lavine*
2. Technical Systems Evaluation (Charge Questions 1, 2, 3, 4)	
2.1 Accelerator .....	Gerig*/SC-1
2.1.1 Findings	
2.1.2 Comments	
2.1.3 Recommendations	
2.2 Storage Ring .....	Wienands*/SC-2
2.3 Technical Integration.....	Sabbi*/SC-3
2.4 Detectors.....	Wisniewski*/SC-4
3. Cost and Schedule (Charge Questions 1, 2, 4) .....	Kao*/SC-5
4. Project Management (Charge Questions 1, 2, 4) .....	Kotcher*/SC-6

\*Lead



# **Closeout Presentation and Final Report Procedures**



**(Use PowerPoint / No Smaller than 18 pt Font)**

## **2.1 Use Section Number/Title corresponding to writing assignment list.**

**List Review Subcommittee Members**

**List Assigned Charge Questions and Review Committee Answers**

### **2.1.1 Findings – What the project told us**

- In bullet form, include your account of factual technical, cost, schedule, and management. Information provided/presented by the Project

### **2.1.2 Comments – What we think about what the project told us**

- In bullet form, include your assessment of project status (observations, concerns, feedback, suggestions, etc.) based on the findings. This section carries more emphasis than the Findings, but does not require an action as do the Recommendations. Do not number your comments.

### **2.1.3 Recommendations – What we think the project needs to do**

1. Beginning with an action verb, provide a brief, concise, and clear statement with a due date.

**For Critical Decision reviews, include a specific recommendation addressing how the Committee judged the readiness for the CD, *i.e.*:**

- The project is ready to proceed to CD-2; *or*
- The project is ready to proceed to CD-2, after addressing the following recommendations



# Format: Final Report

(Use MS Word / 12pt Font)

## 2.1 Use Section Number/Title corresponding to writing assignment list.

### 2.1.1 Findings – What the project told us

Include a brief narrative description of technical, cost, schedule, management information provided by the project. Each subcommittee will emphasize their area of responsibility.

**Cost and schedule subcommittee should provide attachments for approved project cost breakdown and schedule. Management subcommittee should provide attachment for approved project organization and names of personnel.**

### 2.1.2 Comments – What we think about what the project told us

Descriptive material assessing the findings and making observations and conclusions based on the findings. **The committee's answer to the charge questions should be contained within the text of the Comments Section.** Do not number your comments.

### 2.1.3 Recommendations – What we think the project needs to do

1. Beginning with an action verb, provide a brief, concise, and clear statement with a due date.
- 2.

**Please Note: Recommendations are approved by the full committee and presented at the review closeout briefing. Recommendations SHOULD NOT be changed or altered from the closeout report to the Final Report.**



# **Closeout Report on the DOE/SC CD-2/3 Review of the**

## **Muon $g-2$ Project**

**Fermi National Accelerator Laboratory**

**June 25-26, 2015**

**Kurt W. Fisher**

**Committee Chair**

**Office of Science, U.S. Department of Energy**

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  - **Findings**
  - **Comments**
  - **Recommendations**



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- **Findings**
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- **Recommendations**



PROJECT STATUS		
Project Type	MIE / Line Item / Cooperative Agreement	
CD-1	Planned:	Actual:
CD-2	Planned:	Actual:
CD-3	Planned:	Actual:
CD-4	Planned:	Actual:
TPC Percent Complete	Planned: _____%	Actual: _____%
TPC Cost to Date		
TPC Committed to Date		
TPC		
TEC		
Contingency Cost (w/Mgmt Reserve)	\$	_____ % to go
Contingency Schedule on CD-4b	_____ months	_____ %
CPI Cumulative		
SPI Cumulative		



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